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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/722,804	11/26/2003	Joseph Patino	CE12081JEM	8199

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Larry G. Brown
Motorola, Inc.
Law Department
8000 West Sunrise Boulevard
Fort Lauderdale, FL 33322

EXAMINER	
FANTU, YALKEW	

ART UNIT	PAPER NUMBER
2838	

MAIL DATE	DELIVERY MODE
12/07/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/722,804	PATINO ET AL.	
	Examiner	Art Unit	
	Yalkew Fantu	2838	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *21 September 2007*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-15* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-15* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

In view of the APPEAL BRIEF filed on 09/21/2007, PROSECUTION IS HEREBY REOPENED. A new ground of rejection is set forth below.

To avoid abandonment of the application, appellant must exercise one of the following two options:

(1) file a reply under 37 CFR 1.111 (if this Office action is non-final) or a reply under 37 CFR 1.113 (if this Office action is final); or,

(2) initiate a new appeal by filing a notice of appeal under 37 CFR 41.31 followed by an appeal brief under 37 CFR 41.37. The previously paid notice of appeal fee and appeal brief fee can be applied to the new appeal. If, however, the appeal fees set forth in 37 CFR 41.20 have been increased since they were previously paid, then appellant must pay the difference between the increased fees and the amount previously paid.

A Supervisory Patent Examiner (SPE) has approved of reopening prosecution by signing below:

HEZRON WILLIAMS
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2800

Hezron Williams.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 1-12 and 14-15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Brown et al.(US 4,061,956).

With respect to claim 1, Brown et al. (hereinafter Brown) discloses a method of charging a battery (fig. 1), comprising the steps of receiving an input power supply signal (fig. 1, 252) that is used to charge a battery 32; monitoring a voltage level 66 of the input power supply signal 252 to determine when the input power supply signal reaches first and second predetermined thresholds (col. 8, lines 61-64; threshold value of 25 and 28.5); and in response to said monitoring step, selectively controlling a charging switch 12 and 44 that controls the flow of the input power supply signal 252 to the battery 32, wherein said controlling step 42 and 44 comprises activating the switch 12 when the voltage level of the input power supply signal 66 reaches the first predetermined threshold, (which is 25 volts, in this case see col. 8, lines 63) and deactivating the switch when the voltage level of the input power supply signal reaches the second predetermined threshold (disable when the voltage exceeds 29 volts see col. 8, lines 62-65), but does not expressly disclose activating switch when the voltage level of the input power supply signal increases to the first predetermined threshold, and deactivating the switch when the voltage level decreases to reach the second predetermined threshold. But, it would have been obvious to one of ordinary skill in the art to activating the switch 12 when the voltage level of the input power supply signal 66 increases to reach the first predetermined threshold, and deactivating the switch when the voltage level of the input power supply signal decreases to reach the second predetermined threshold setting the controlling program in such a way to activate switching when voltage level of the input power supply increase o reach predetermined

threshold, and deactivating switch when input power supply signal decrease to reach second predetermined threshold value. A control circuit can also include relay control circuit that functions to control various relays so that it works as described above (see col. 9, lines 5-10). The reason is to prevent the charging element for being overcharged or completely depleted.

With respect to claim 2, Brown further discloses a capacitor (contained in the boost circuit fig. 1, 14); (the capacitor, as claimed, does not maintain voltage of the input power), the voltage level of the input power supply signal (see fig. 1, voltage sensor 66) to indicate that the electronic device is being charged.

With respect to claim 4, Brown discloses synchronizing with said controlling of the charging switch (fig. 1, 12) the control of the second switch (fig. 1, 44) that regulates current flow to a backlighting circuit (84) such that the second switch to the backlighting circuit is activated when the charging switch is activated and deactivated when the charging switch is deactivated (activate and deactivate when the switch is on and off).

Regarding claim 8, Brown discloses receiving an input power supply signal (fig. 1, 18 and 80) in an electronic device having a capacitor (fig. 1, 14) with a value high enough to maintain a voltage level of the input power supply signal (col. 8, lines 54-55) to indicate that the electronic device is being charged to prevent disabling of a charging sequence for the battery 32, monitoring the voltage level of the input power supply signal to determine when the voltage level of the input power supply signal reaches first and second predetermined thresholds (col. 8, lines 55-64) ; (selectively controlling a charging switch (fig.1, 44) that controls the flow of the input power supply signal to the battery 32, wherein said controlling step comprises activating the switch when the

voltage level of the input power supply signal reaches the first predetermined threshold and deactivating the switch when the voltage level of the input power supply signal reaches the second predetermined threshold (col. 8, lines 62-64) .

With respect to claim 9, Brown et al discloses the claimed charging system (Fig. 1) for charging a battery (Fig.1 number 26) comprising an input for receiving an input power (Fig. 1 number 10), a charging switch (Fig. 1 number 12 and 44) and a controller (Fig. 1 'Control Circuit I' and Col 3 line 7). Control charging switch (Fig. 1 number 44) activate charging switch (Fig. 1 number 12) when input power (Fig. 1 number 16) reaches predetermined threshold. The voltage control circuit of Fig. 1 number 40 receives the voltage signals, which reflects state of charge of the battery. (Col.3 line 65-68 and 4, line 1-5) it is well known to those skilled in the art that the state of charge of a battery indicates the threshold voltage difference for activating and deactivating the charging switches.

With respect to claim 10, Brown discloses, further, comprising a capacitor (that maintains a voltage level (fig. 1, 66) of the input power supply signal (fig. 1, 66) that said controller monitors to determine that said battery is being charged (col. 4, lines 5-10)

With respect to claim 11, Brown discloses a circuit (fig. 1, control circuit I) and a second switch (fig. 1, 44) that regulates current to flow to said circuit, said controller is further programmed (col. 3, lines 57-63) to synchronizing with controlling of the charging switch (fig. 1, 12) the control of the second switch (fig. 1, 44) that regulates current flow to a backlighting circuit (84) such that the second switch to the backlighting circuit is activated when the charging switch is activated and deactivated when the charging switch is deactivated (activate and deactivate when the switch is on and off).

With respect to claim 12, backlighting circuit (Fig. 1. Number 84 and Col.8 line 65 to Col. 9 line 40)

With respect to claim 14 rectifier (Fig .1 number 14), boost circuit includes a rectifier.

With respect to claim 15 the magnitude of the predetermined threshold (Col. 8, lines 54-64).

Regarding method claims 3, 5-7 the method steps are met by the operation of Brown et al. as applied to claims 1, 2, 4, 8-12, 14 and 15.

Claim 13 is rejected under 35 U.S.C. 103(a) as being unpatentable over Brown et al (US 4061956) in view of Patino et al.(US 6972542).

With respect to claim 13, Brown et al. teaches the invention set forth above and further teaches battery charging system (Fig. 1). Brown lacks the wireless charging system. Patino et al teaches that it is well known to use a wireless battery to the charging system. It would have been obvious to one ordinary skill in the art at the time the invention was made to modify the charging system of Brown et al with that of Patino et al for the purpose of having a charging system with wireless capability for easy and portable use.

Response to Amendment

The amendment filed on May 15, 2006 under 37 CFR 1.131 has been considered but is ineffective to overcome the combined references of Brown et al. and Patino et al.

Applicant argues that "the control circuit of Brown monitors the voltage of the battery itself and manipulates the switch (12) and the boost circuit (14) based on the battery

voltage, in contrast to the claimed invention, which is, the input charging signal, not the battery voltage, is monitored and controller adjusts switch settings based on the voltage level of the input signal". Brown et al, however, discloses an input charging signal (18 and 80 of fig. 1) is monitored (voltage sensor 66) and the controller (fig. 1, 44) adjusts switch settings based on the voltage level of the input signal (see additional note on col. 8, lines 54-60).

Applicant also argues that Brown et al mentions nothing about an electronic device having a capacitor with a value high enough to maintain a voltage level of the input power supply signal to indicate the electronic device is being charged to prevent disabling. It is not, however, clear as to how applicant's capacitors C1 and C2, which are not directly connected to the input power supply signal, could maintain voltage level of the input power supply unless " input power supply" is broadly interpreted as power within the circuit, which is how the examiner interprets it. The indication of charging to prevent disabling of charging flows naturally because charging occurs, so there is no discharging.

With regard to applicant argument that " ... switch means does not regulate current flow ..." But, as indicated above, Control charging switch (Fig. 1 number 44) activate charging switch (Fig. 1 number 12) when input power (Fig. 1 number 16) reaches predetermined threshold. Contrary to applicant argument, unless current is regulated this way, charging current to the required threshold level becomes unattainable. The control controls the flow of the input power supply signal to the battery 32, wherein said controlling step comprises activating the switch when the voltage level

of the input power supply signal reaches the first predetermined threshold and deactivating the switch when the voltage level of the input power supply signal reaches the second predetermined threshold (col. 8, lines 62-64). A control circuit can also include relay control circuit that functions to control various relays so that it also works as described above (see col. 9, lines 5-10).

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Yalkew Fantu whose telephone number is 571-272-8928. The examiner can normally be reached on M - F: 7- 4.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Akm E. Ullah can be reached on 571-272-2361. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

BAO Q. VU
PRIMARY EXAMINER